REMARKS

Claims 1-93 were pending in the present application. The Examiner has rejected claims 1-93. Applicants have amended claims 1, 3, 5, 15, 17, 19, 35, 37 and 39. Applicants have cancelled, without prejudice, claims 2, 4, 16, 18, 36 and 38. Claims 1, 3, 5-15, 17, 19-35, 37 and 38-93 are pending after the amendments.

A. CLAIMS 1-8

Claims 1-8 stand rejected under 35 U.S.C. § 103(a) as being obvious over U.S. Patent No. 6,366,622 B1 ("Brown") in view of U.S. Patent No. 5,856,763 ("Reeser"). Applicants have amended claim 1 and cancelled, without prejudice, claims 2 and 4. The elements of claims 2 and 4 have been added to claim 1. In addition, claims depending from claims 2 and 4 have now been made to depend from claim 1.

Claim 1 now recites as follows:

> An oscillator, comprising:
>
> a first resonator having a first tuning input to tune the first resonator as a function of a first current applied to the first tuning input; and
>
> a second resonator coupled to the first resonator, the second resonator having a second tuning input to tune the second resonator as a function of a second current applied to the second tuning input,
>
> wherein the first resonator comprises a first output and the second resonator comprises a second output, and
>
> wherein the output of the first resonator is fed back to the second tuning input for the second resonator, and the output of the second resonator is fed back to the first tuning input for the first resonator.

Applicants argued in the Response dated February 24, 2004 that Brown does not teach a first resonator and a second resonator as recited in claim 1. Applicants incorporate these arguments herein by reference for completeness. In the Office Action dated June 9, 2004 the Examiner did not dispute the arguments made by Applicants in the Response dated February 24, 2004, but instead further elaborated on his discussions with respect to Reeser as teaching a first resonator and a second resonator as set forth in claim 1. Applicants respectfully submit that Reeser does not make up for the teaching deficiencies of Brown.

The Examiner alleges that element 26 and element 28 are a first resonator and a second resonator, respectively, as set forth in claim 1. Applicants respectfully disagree. According to

FIG. 1 and col. 3, lines 40-49 of Reeser, element 26 and element 28 are transmission line 26 and transmission line 28, respectively. Applicants further submit that FIG. 1 labels elements 26 and 28 as block T1 and T2, the inference being that T1 stands for first transmission line and T2 stands for second transmission line. The transmission lines 26, 28 are not resonators as set forth in claim 1.

If the transmission lines 26, 28 are resonators as alleged by the Examiner, then the following is the logical conclusion: the Examiner is alleging that a transmission line has a tuning input to tune the transmission line as a function of a current applied to the tuning input. Applicants respectfully request that the Examiner reconsider this interpretation of a tunable transmission line as a resonator. The transmission line 26, for example, is described in Reeser as a static element with static components: an inductor L3, a capacitor C3 and a capacitor C4 in a pi-configuration. See col. 3, lines 57-60 of Reeser. The transmission line 28 is described in Reeser as a static element with static components: an inductor L4, a capacitor C5 and a capacitor C6 in a pi-configuration. The transmission lines 26, 28 do not have tuning inputs and are not tuned as a function of currents.

Also, if the Examiner maintains the rejection based on a transmission line as a resonator, Applicants respectfully request that the Examiner explain, *with specificity*, exactly where in the apparatus described in Brown, the Examiner would insert the transmission line as a resonator.

Although Applicants have successfully argued that the combination of Brown and Reeser as alleged by the Examiner does not teach or suggest each and every element as set forth in claim 1, Applicants to expedite the prosecution of the case have amended claim 1 with the elements of claims 2 and 4. Applicants respectfully reserve the right to prosecute the subject matter of claim 1 as originally filed in a subsequent continuing application.

Claim 1 now further recites that an output of the first resonator is fed back to the second tuning input for the second resonator and that an output of the second resonator is fed back to the first tuning input for the first resonator. Applicants respectfully submit that, even if Brown and Reeser teach a first resonator and a second resonator as alleged by the Examiner (but which Applicants dispute), Brown and Reeser as alleged by the Examiner do not teach or suggest the relationship between the first resonator and the second resonator as set forth in claim 1. Referring to FIG. 1 of Reeser, the output of transmission line 26 is common output port 24 and the output of transmission line 28 is also common output port 24 (i.e., element 24 is a *common*

output port because of the common output of the transmission lines 26, 28). Thus, the output of one transmission line (i.e., the alleged resonator according to the Examiner) is not fed back to the tuning input of the other transmission line (i.e., the other alleged resonator).

For at least the above reasons, Applicants respectfully submit that claim 1 is not rendered obvious by the combination of Brown and Reeser as alleged by the Examiner. It is therefore respectfully requested that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 1 and its dependent claims 3 and 5-8.

Claim 3 - Quadrature Output

The Examiner alleged that "[c]laims 2-4 contain similar limitations addressed in claim 1, and therefore are rejected under a similar rationale."

Claim 3 recites "wherein the first and second outputs comprises a quadrature output". Applicants have carefully reviewed the Examiner's "rationale" for rejecting claim 1 and cannot find any reference as to how the outputs of the resonators comprise a quadrature output. Brown and Reeser do not teach or suggest these elements. In fact, Reeser alleged to teach two transmission line "resonators" is an entirely inappropriate reference with respect to the outputs of transmission lines comprising a quadrature output as might be alleged by the Examiner if the Examiner had discussed such a point. In differentiating a prior art device (i.e., a Wilkinson device), Reeser states that "[s]ince the present invention is only operable at one frequency at a time, there is no requirement to configure the combiner circuit to maintain any particular phase relationship between signals". See col. 2, lines 42-45 of Reeser. Applicants respectfully submit that, if the combiner circuit 10, which includes transmission lines 26, 28, of Reeser does not "maintain any particular phase relationship between signals", then Reeser cannot be offered by the Examiner in combination with Brown as maintaining a quadrature phase relationship.

Applicants respectfully request that the Examiner address claim 3 individually in the subsequent office action should the rejection be maintained. Otherwise, Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 3.

Claim 5 -- Transconductance Cell

Claim 5, which depends from claim 1, recites "a first transconductance cell positioned between the output of the first resonator and the second tuning input, and a second

transconductance cell positioned between the output of the second resonator and the first tuning input".

After examining the Office Action very carefully, Applicants respectfully submit that Examiner has not identified a first transconductance cell and a second transconductance cell in Brown or Reeser. In fact, the text cited by the Examiner does not mention a transconductance cell.

Applicants respectfully request that the Examiner recite exactly where in Brown or Reeser that a **transconductance cell** as set forth in claim 5 is recited. Since the Examiner has not presented any arguments as to how Brown or Reeser teach a transconductance cell as set forth in claim 5, the Examiner cannot maintain a rejection of claim 5 (i.e., the Examiner has not met his burden of going forward -- has not presented a prima facie case of obviousness).

Applicants respectfully request that the Examiner address claim 5 individually in the subsequent office action should the rejection be maintained. Otherwise, Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 5.

Claim 6 -- Transconductance Cell

Claim 6, which depends from claims 5 and 1, recites "wherein the first transconductance cell has a digitally programmable variable gain".

The Examiner alleges that col. 24, lines 33-67 teach or suggest these elements. Col. 24, lines 33-67 relate to a frequency hopping scheme in which parts of the radio are tuned on and off to reduce overall current and power consumption.

Applicants are at a loss as to how this text cited by the Examiner teaches a **digitally programmable variable gain**. Furthermore, the Examiner failed to cite any text that teaches or suggests a **transconductance cell** as set forth in claim 6.

Applicants respectfully request that the Examiner address claim 5 individually in the subsequent office action should the rejection be maintained. Otherwise, Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 6.

Claim 7 -- Transconductance Cell

Claim 7, which depends from claims 6, 5 and 1, recites "wherein the second transconductance cell has a digitally programmable variable gain".

The Examiner alleges that col. 30, line 36 to col. 31, lines 66 teach or suggest these elements. Col. 30, line 36 to col. 31, lines 66 relate to "an architecture 1100 [that] provides for a low-power and low interference implementation of wireless communications, including that of the Bluetooth specification". See col. 30, lines 15-18 of Reeser. Thus, this part of the cited text does not teach or suggest digitally programmable variable gain, but again teaches lower power consumption. The other part of the cited text relates to "Additional SOI Discussion" which does not appear to be related to digitally programmable variable gain either.

Applicants respectfully submit that text cited by the Examiner does not appear to discuss a **digitally programmable variable gain**. Furthermore, the Examiner failed to cite any text that teaches or suggests a **transconductance cell** as set forth in claim 7.

Applicants respectfully request that the Examiner address claim 7 individually in the subsequent office action should the rejection be maintained. Otherwise, Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 7.

Claim 8 - Feedback

Claim 8, which depends from claims 5 and 1, recites "wherein the output of the first resonator is fed back to the first tuning input, and the output of the second resonator is fed back to the second tuning input".

The Examiner admits that "Brown et al fails to disclose the first resonator is fed back to the first tuning put, and the output of the second resonator is fed back to the second tuning input". Office Action at page 4. However, the Examiner alleges that Reeser teaches or suggests these elements. Applicants respectfully submit that Reeser does not make up for the teaching deficiencies of Brown.

The Examiner has alleged that transmission line 26 and transmission line 28 are the first resonator and the second resonator, respectively. Accordingly, the Examiner is alleging that:

> the output of the transmission line 26 is fed back to a tuning input of the transmission line 26; and that the output of the transmission line 28 is fed back to the transmission line 28.

Applicants have been hard pressed to find support for this allegation in Reeser. Applicants respectfully submit that Brown and Reeser do not teach or suggest these elements.

Applicants respectfully request that the Examiner address claim 8 individually in the subsequent office action should the rejection be maintained. Otherwise, Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 8.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 1 and its dependent claims 3 and 5-8.

B. CLAIMS 15-22

Claims 15-22 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser. Applicants have amended claim 15 and cancelled, without prejudice, claims 16 and 18. The elements of claims 16 and 18 have been added to claim 15. In addition, claims depending from claims 16 and 18 have now been made to depend from claim 15.

Claim 15 now recites as follows:

> An oscillator, comprising:
> a first resonator having a first tuning input;
> a second resonator coupled to the first resonator, the second resonator having a second tuning input;
> first control means for controlling a first current applied to the first resonator to tune the first resonator; and
> second control means for controlling a second current applied to the second resonator to tune the second resonator,
> wherein the first resonator comprises a first output and the second resonator comprises a second output, and
> wherein the first control means feeds back the output of the second resonator to the first tuning input, and the second control means feeds back the output of the first resonator to the second tuning input.

Claims 15, 17 and 19-22 each recite, either explicitly or through dependence, a first resonator and a second resonator. Accordingly, the arguments made with respect to claims 1, 3 and 5-8 are also made with respect to claims 15, 17 and 19-22.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 15, 17 and 19-22.

Claim 17 - Quadrature Output

The Examiner alleged that "[c]laims 16-18 contain similar limitations addressed in claim 15, and therefore are rejected under a similar rationale."

Claim 17, which depends from 15, recites "wherein the first and second outputs comprises a quadrature output".

Since some elements recited in claim 17 are similar to some elements recited in claim 3, the arguments made with respect to claim 3 are also made herein with respect to claim 17.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 17.

Claim 19 – Transconductance Cell

Claim 19, which depends from claim 15, recites "wherein the first control means comprises a first transconductance cell to feed back the output of the second resonator to the first tuning input, and the second control means comprises a second transconductance to feed back the output of the first resonator to the second tuning input".

Since some elements recited in claim 19 are similar to some elements recited in claim 5, the arguments made with respect to claim 5 are also made herein with respect to claim 19.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 19.

Claim 20 -- Transconductance Cell

Claim 20, which depends from claims 19 and 15, recites "wherein the first transconductance cell comprises first programming means for digitally programming gain".

Since some elements recited in claim 20 are similar to some elements recited in claim 6, the arguments made with respect to claim 6 are also made herein with respect to claim 20.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 20.

Claim 21 – Transconductance Cell

Claim 21, which depends from claims 20, 19 and 15, recites "wherein the second transconductance cell comprises second programming means for digitally programming gain".

Since some elements recited in claim 21 are similar to some elements recited in claim 7, the arguments made with respect to claim 7 are also made herein with respect to claim 21.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 21.

Claim 22 - Feedback

Claim 22, which depends from claims 19 and 15, recites "wherein the first control means further feeds back the output of the first resonator to the first tuning input, and the second control means feeds back the output of the second resonator to the second tuning input".

Since some elements recited in claim 22 are similar to some elements recited in claim 8, the arguments made with respect to claim 8 are also made herein with respect to claim 22.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 22.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 15, 17 and 19-22.

C. CLAIMS 29 AND 30

Claims 29 and 30 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser.

Claim 29 recites as follows:

An oscillator, comprising:
a first resonator having a first tuning input and a first output;
a second resonator having a second tuning input and a second output;
a first transconductance cell coupled between the first output and the second tuning input;
a second transconductance cell coupled between the second output and the first tuning input;
a third transconductance cell coupled between the first output and the first tuning input; and
a fourth transconductance cell coupled between the second output and the second tuning input.

Claims 29 and 30 each recite, either explicitly or through dependence, a first resonator and a second resonator. Accordingly, the arguments made with respect to claims 1, 3 and 5-8 are also made with respect to claims 29 and 30.

Applicants would like to stress that Examiner has not identified a first transconductance cell, a second transconductance cell, a third transconductance cell and a fourth transconductance cell as set forth in claim 29 in Brown or Reeser. The text cited by the Examiner does not mention a transconductance cell. Since the Examiner has not presented any arguments as to how Brown or Reeser a first transconductance cell, a second transconductance cell, a third

transconductance cell and a fourth transconductance cell as set forth in claim 29, the Examiner cannot maintain a rejection of claim 5 (i.e., the Examiner has not met his burden of going forward -- has not presented a prima facie case of obviousness).

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 29 and 30.

Claim 30 - Quadrature Output

Claim 30, which depends from 29, recites "wherein the first and second outputs comprises a quadrature output".

Since some elements recited in claim 30 are similar to some elements recited in claim 3, the arguments made with respect to claim 3 are also made herein with respect to claim 30.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 30.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 29 and 30.

D. CLAIMS 35-42

Claims 35-42 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser. Applicants have amended claim 35 and cancelled, without prejudice, claims 36 and 38. The elements of claims 36 and 38 have been added to claim 35. In addition, claims depending from claims 36 and 38 have now been made to depend from claim 35.

Claim 35 now recites as follows:

> A transceiver, comprising:
>
> a current controlled oscillator including a first resonator having a first tuning input to tune the first resonator as a function of a first current applied to the first tuning input, and a second resonator coupled to the first resonator, the second resonator having a second tuning input to tune the second resonator as a function of a second current applied to the second tuning input; and
>
> a controller having a first control to control the first current to the first tuning input, and a second control to control the second current to the second tuning input,
>
> wherein the first resonator comprises a first resonator output and the second resonator comprises a second resonator output, and
>
> wherein the first resonator output is fed back to the second tuning input for the second resonator, and the second resonator output is fed back to the first tuning input for the first resonator.

Claims 35, 37 and 39-42 each recite, either explicitly or through dependence, a first resonator and a second resonator. Accordingly, the arguments made with respect to claims 1, 3 and 5-8 are also made with respect to claims 35, 37 and 39-42.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 35, 37 and 39-42.

Claim 37 - Quadrature Output

Claim 37, which depends from 35, recites "wherein the first and second resonator outputs comprises a quadrature output".

Since some elements recited in claim 37 are similar to some elements recited in claim 3, the arguments made with respect to claim 3 are also made herein with respect to claim 37.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 37.

Claim 39 -- Transconductance Cell

Claim 39, which depends from claim 35, recites "wherein the current controlled oscillator comprises a first transconductance cell positioned between the first resonator output and the second tuning input, and a second transconductance cell positioned between the second resonator output and the first tuning input".

Since some elements recited in claim 39 are similar to some elements recited in claim 5, the arguments made with respect to claim 5 are also made herein with respect to claim 39.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 39.

Claim 40 -- Transconductance Cell

Claim 40, which depends from claims 39 and 35, recites "wherein the first transconductance cell has a digitally programmable variable gain".

Since some elements recited in claim 40 are similar to some elements recited in claim 6, the arguments made with respect to claim 6 are also made herein with respect to claim 40.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 40.

Claim 41 -- Transconductance Cell

Claim 41, which depends from claims 40, 39 and 35, recites "wherein the second transconductance cell has a digitally programmable variable gain".

Since some elements recited in claim 41 are similar to some elements recited in claim 7, the arguments made with respect to claim 7 are also made herein with respect to claim 41.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 41.

Claim 42 - Feedback

Claim 42, which depends from claims 39 and 35, recites "wherein the first resonator output is fed back to the first tuning input, and the second resonator output is fed back to the second tuning input".

Since some elements recited in claim 42 are similar to some elements recited in claim 8, the arguments made with respect to claim 8 are also made herein with respect to claim 42.

Applicants again respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 42.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 35, 37 and 39-42.

E. CLAIMS 48-56

Claims 48-56 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser.

Claim 48 recites as follows:

A method of tuning an oscillator, comprising:
converting an output of a first resonator to a first current;
converting an output of a second resonator to a second current;
tuning a first resonator as a function of the second current; and
tuning the second resonator as a function of the first current.

Claims 48-56 each recite, either explicitly or through dependence, a first resonator and a second resonator. Accordingly, the arguments made with respect to claims 1, 3 and 5-8 are also made with respect to claims 48-56.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 48-56.

F. CLAIM 57

Claim 57 stands rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser. Neither Brown nor Reeser, individually or combined, teaches or suggests each and every element as set forth in claim 57. Claim 57 is reproduced below.

> A method of tuning an oscillator having a tuning range over a tuning frequency, the tuning frequency being divided into a plurality of frequency bands, the method comprising:
>
> generating a first digital word;
>
> selecting one of the frequency bands with the first digital word;
>
> generating a second digital word; and
>
> tuning the oscillator to an operating frequency within the selected frequency band with the second digital word.

Brown does not teach a method of tuning an oscillator as set forth above. Instead, in carefully reviewing the text cited by the Examiner, Brown teaches, in short, that an analog signal is received by the antenna 108, down converted by mixers 216, 218, filtered by filters 222, 224 and converted into digital data (i.e., Data_I and Data_Q) by analog-to-digital converters (ADCs) 226, 228. Digital data is converted into an analog signal by digital-to-analog converters (DAC) 230, 232, filtered by filters 234, 236, and up converted by mixers 238, 240 before being transmitted on antenna 108. The digital data is not used to tune an oscillator, but is merely information (e.g., communications) transmitted or received by the transceiver 100, 200. Brown does teach a digital control for the automatic gain control (AGC), but this merely controls gain and does not relate to tuning an oscillator. Brown also teaches the use of large dynamic range ADCs 226, 228 that allow for filtering to be done in the digital domain. The advantages of which are listed in col. 12, lines 46-62 of Brown. Applicants respectfully draw the attention of the Examiner to col. 12, lines 46-62 of Brown because these advantages relate to filters and not oscillators as may have been alleged by the Examiner. The filters are used, for example, to filter signals received by the antenna 108 or to filter signals destined for transmission on the antenna 108. See, e.g., FIGS. 4 and 5 of Brown. Brown also teaches a digital processing stage 300 including a decimation filter 302, a digital receive filter 306 and a digital transmit filter 308. See, e.g., col. 17, lines 32-37. However, these components also relate to filters and do not relate to tuning an oscillator. Furthermore, Brown does not teach other elements as set forth in claim 57 such as, for example, a tuning frequency of an oscillator being divided into a plurality of frequency bands, the selection of one of the frequency bands with a first digital word, and the tuning of the oscillator

to an operating frequency within the selected frequency band with a second digital word. Reeser is also silent, for example, as to the digital words as set forth in claim 57 and other teaching deficiencies of Brown.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 57.

G. CLAIMS 58-75

Claims 58-75 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser.

Claims 58-75 each recite, either explicitly or through dependence, a first resonator and a second resonator. Accordingly, the arguments made with respect to claims 1, 3 and 5-8 are also made with respect to claims 58-75.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 58-75.

H. CLAIM 76

Claim 76 stands rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser.

Since some elements recited in claim 76 are similar to some elements recited in claim 57, the arguments made with respect to claim 57 are also made herein with respect to claim 76.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claim 76.

I. CLAIMS 77-93

Claims 77-93 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser.

Claims 77-93 each recite, either explicitly or through dependence, a first resonator and a second resonator. Accordingly, the arguments made with respect to claims 1, 3 and 5-8 are also made with respect to claims 77-93.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 77-93.

J. CLAIMS 9-14, 23-28, 31-34 AND 43-47

Claims 9-14, 23-28, 31-34 and 43-47 stand rejected under 35 U.S.C. § 103(a) as being obvious over Brown in view of Reeser and further in view of U.S. Patent No. 6,148,048 ("Kerth"). Applicants respectfully traverse the rejection.

The arguments made above with respect to claims 1-8, 15-22, 29, 30, 35-42 and 48-56 are also made with respect to dependent claims 9-14, 23-28, 31-34 and 43-47 since claims 9-14, 23-28, 31-34 and 43-47. Applicants respectfully submit that the deficiencies in the teachings of Brown and Reeser are not made up by the teachings of Kerth so as to maintain a prima facie case of obviousness.

In addition, Brown teaches away from Kerth. Brown teaches a direct-conversion transceiver (i.e., a direct down conversion receiver and a direct up conversion transmitter) and its advantages as well as teaches away from intermediate-frequency transceivers. See, e.g., col. 1, lines 47-55 of Brown. On the other hand, Kerth teaches an intermediate frequency transceiver. See, e.g., Abstract and col. 1, lines 44-59 of Kerth. Therefore, since Brown and Kerth cannot be properly combined, Brown, Reeser and Kerth cannot be properly combined and a rejection based on the combination of Brown, Reeser and Kerth cannot be maintained.

For at least the above reasons, Applicants respectfully request that the rejection under 35 U.S.C. § 103(a) be withdrawn with respect to claims 9-14, 23-28, 31-34 and 43-47.

K. CONCLUSION

In view of at least the foregoing, it is respectfully submitted that the pending claims 1, 3, 5-15, 17, 19-35, 37 and 38-93 are in condition for allowance. Should anything remain in order to place the present application in condition for allowance, the Examiner is kindly invited to contact the undersigned at the below-listed telephone number.

Please charge any required fees not paid herewith or credit any overpayment to the Deposit Account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

Dated: September 9, 2004

Respectfully submitted,

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